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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/560,462	12/14/2005	Jacques Vanier	kernco01.008	5492

7590  
Gordon E Nelson  
57 Central Street  
P O box 782  
Rowley, MA 01969

EXAMINER
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SHINGLETON, MICHAEL B

ART UNIT	PAPER NUMBER
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2815

MAIL DATE	DELIVERY MODE
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01/14/2010

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/560,462	<b>Applicant(s)</b> VANIER, JACQUES	
	<b>Examiner</b> Michael B. Shingleton	<b>Art Unit</b> 2815	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 09 September 2009.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) 16-23 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>12-14-05: 07-23-09: 08-01-09</u> | 6) <input type="checkbox"/> Other: _____  |

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### **DETAILED ACTION**

Applicant's election of Group I in the reply filed on 09-09-2009 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

#### ***Claim Rejections - 35 USC § 112***

Claims 1-10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The term being subsequently "employed" to calibrate makes the scope of the claim unclear since it cannot be determined what process is being done by the term "employed".

Claims 1-15 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

A complete reading of the original specification, claims and drawings just does not present a written description sufficient in detail to enable one to make and/or use the invention without undue experimentation. Page 8 for example states that plot 213 can be compared with the plot for the desired modulation index and then the modulation index can be had that lies within 10% of the desired value. So even if one could figure out exactly how the comparison is done (Applicant states that it is done manually which involves a judgment on behalf of a person to determine what would constitute a match and there are no rules that determine what constitutes a match so it is impossible to know what applicant had in mind for what determines a match and everyone is different so what one person may consider a match is not a match to another.), still the claims recite that a desired modulation index is achieved yet again the original description is for an invention where the desired modulation index is not achieved i.e. one can come somewhat close with a "about 10%" value. Without hard fast examples, structures and rules and even a description of an invention that can achieve a desired value one could not make the invention without undue experimentation. Should an individual be successful after undue experimentation to achieve an invention that would cause the laser to run at a "desired modulation index", it would be impossible to determine if the way that that individual compared plots was the same way that applicant intended. The way and the structure necessary to implement the comparison is insufficiently set forth in the original disclosure. Just look at claim 5 that recites that the "modulation index is ambiguously determined". Note the term "ambiguously". If it is ambiguous as admitted by applicant as to how the

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modulation index is determined then clearly it would take undue experimentation to come up with how and with what applicant does to determine the modulation index.

### ***Claim Rejections - 35 USC § 102***

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-15 in so far as understood are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Applicant's admitted Prior art as presented by Figure 1 and the relevant text in the original specification (AAPA).

The terms "employed" and "desired modulation index" are unclear or at the very least very broad in the case of "desired" for what is a "desired" modulation index? It seems to parallel the term "predetermined" modulation index. Therefore in the prior art the ending modulation index the laser 103 operates at is the "desired modulation index". In the prior art the laser is input to a alkali metal vapor cell and the laser is modulated/calibrated and at a end running point this would correspond to a particular modulation index from the absorption spectrum of the alkali metal vapor is thus determined and employed in the laser source. Again the claims are very broad and all such lasers as applicant recognizes would have a plot like that presented in Figure 2 of the instant invention and thus so would the prior art. The photo-detector does inherently measure the "minima" and maximums for it measures all the values of the light emitted from the resonance cell 111.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. In Gnauck et al. US 5,959,658 it is noted that methods and devices exist that can determine the optimum modulation index in lasers that are especially deployed for use in hybrid fiber/coax networks.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael B. Shingleton whose telephone number is (571) 272-1770.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ken Parker, can be reached on (571) 272-2298. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in cursive script, reading "Michael B. Shingleton". The signature is written in a dark, slightly grainy ink.

MBS  
January 12, 2010

/Michael B. Shingleton/  
Michael B Shingleton  
Primary Examiner  
Group Art Unit 2815